The State of New Hampshire
Department of Environmental Services

Thomas S. Burack, Commissioner

February 2, 2016

The Honorable Andrew Christie, Chair
Executive Departments and Administration Committee
Legislative Office Building, Room 306
Concord, New Hampshire 03301

Re: House Bill 1282, relative to relative to the state building code

Dear Chair Christie and Members of the Committee:

Thank you for the opportunity to testify on House Bill 1282. This bill updates the definition of the state building code to include the 2015 editions of the International Building Code and several other codes, including the 2015 International Energy Conservation Code (IECC). The New Hampshire Department of Environmental Services (NHDES) strongly supports this bill as written.

Energy for heating, cooling and electrical use in residential and commercial buildings accounts for about half of all energy consumed in the state. Maximizing building-energy efficiency during new construction and major renovations reduces the cost associated with installing energy efficiency measures, while increasing the durability of the building, providing increased safety and comfort, reducing air pollution, and avoiding significant energy costs for the building's occupants[1]. Adoption of the 2015 IECC, including its robust requirements for energy efficiency measures, such as insulation and air-sealing measures[2], will result in both economic and environmental benefits for the state for decades to come by reducing energy use in the commercial and residential building sector. The costs associated with these more robust efficiency measures are recouped by the reduced energy costs over the life of the building.

A structure built to the 2009 IECC, the current New Hampshire code, is 16 percent more energy efficient than one built to the 2006 IECC, the previous NH energy code. Likewise, the 2015 IECC represents an additional 15 percent improvement in energy performance over the 2009 IECC. With the continued development of advanced materials and technology, New Hampshire builders can meet the more stringent codes with cost-effective efficiency measures. The US Department of Energy estimates that, for a home in our region, referred to as (Climate Zones 5 and 6), a homeowner could expect to save $7,700 to $11,200 (respectively) over a thirty-year period. The simple payback

[1] NH OEP (2014). New Hampshire 10-Year Energy Strategy, https://www.nh.gov/oep/energy/programs/documents/energy-strategy.pdf, pp. 32.
[2] Included as R-value and U-value requirements for insulation and fenestration measures

on the upfront investment would occur in four to five years[3]. Many of the energy-efficiency measures will continue to save money, provide additional comfort, and reduce emissions of air pollution associated with energy production beyond this time frame.

In accordance with RSA 155-A:10, the Building Code Review Board conducted an in-depth evaluation of the 2015 IECC and unanimously recommended them for adoption by the NH General Court. House Bill 1282 proposes adoption of the 2015 IECC with no changes or amendments. NHDES strongly supports this approach, particularly with regard to the 2015 IECC requirements regarding insulation and air-sealing, as they affect the heat loss/heat gain of a building. Installing the appropriate measures necessary to achieve these values is far less costly when done during construction or renovations, and owners and occupants will realize benefits from day one. Further, the codes are designed with the recognition that buildings are complex systems and the various components of the IECC are designed to work together. If one measure is relaxed it may impact the potential effectiveness of other measures. In order to realize the full benefits of the 2015 IECC, it needs to be adopted as initially designed. As noted in the New Hampshire 10-Year Energy Strategy, developed by the legislative State Energy Advisory Council in 2014, *"Every building that is constructed in an inefficient manner is a lost opportunity to keep more of our energy dollars in state, and retrofitting a building later costs more than building it efficiently from the start."*[4]

Finally, energy efficiency measures have a direct, positive impact on public health and the quality of our natural environment. Reducing energy demand leads to lower emissions of smog-forming compounds and particle pollution that cause direct health impacts, mercury emissions that poison our lakes and streams, and greenhouse gas emissions that contribute to climate change.

Thank you again for the opportunity to comment on HB 1282. Should you have further questions or need additional information, please feel free to contact either Craig Wright, Director of the Air Resources Division (271-1108, craig.wright@des.nh.gov) or Rebecca Ohler, Administrator of the Technical Services Bureau (271-6749, rebecca.ohler@des.nh.gov).

Sincerely,

Thomas S. Burack
Commissioner

cc: Sponsors HB1282: Reps. C. McGuire, C. Roberts

[3] US DOE (2015).National Cost-Effectiveness of the Residential Provisions of the 2015 IECC, Pacific Northwest Labs, https://www.energycodes.gov/sites/default/files/documents/2015IECC_CE_Residential.pdf

[4] NH OEP (2014). New Hampshire 10-Year Energy Strategy, https://www.nh.gov/oep/energy/programs/documents/energy-strategy.pdf, pp. 32.